

Pollution Detection Devices

The instrument shown in the photo at right is sensing, from a considerable distance, the emissions from a volcanic eruption in Mexico. Called COSPEC IVB—short for correlation spectrometer—it was originally developed by Barringer Research, Inc., of Golden, Colorado and Rexdale, Ontario under contract to Johnson Space Center; for aircraft or spacecraft use, Johnson needed a remote sensor capable of measuring sulfur dioxide and nitrogen dioxide in the atmosphere. The Barringer system, based on the firm's earlier work in measuring smokestack pollutants, was used by Johnson to prepare air pollution profiles of several American cities. Barringer markets a refined version—COSPEC—which is in service with many pollution control agencies in the United States and a number of foreign countries.

An associated Barringer product (below) is GASPEC—a compression of Non-dispersive Gas Filter Spectrometer—used by such customers as research agencies and oil/mineral exploration companies. GASPEC is an infrared/ultraviolet gas analyzer which can be used either as a ground-based detector or in aircraft/spacecraft applications. Extremely sensitive, it is useful in air pollution investigations for detecting a variety of "trace" elements, vapors which exist in the atmosphere in very small amounts. Barringer built a special version of GASPEC for Langley Research Center's Monitoring Air Pollution from Satellites project, a forthcoming effort to measure various trace gases in the atmosphere above Earth's central latitudes.

